Delta Independent Science Board Meeting
December 1-2, 2011

-Meeting Summary-

Day 1: December 1, 2011 - (9:00 a.m. – 4:30 p.m. PDT)

1. Welcome

The meeting was called to order at 9:00 a.m., December 1, 2011, by the Chair of the Delta Independent Science Board (ISB or the Board), Dr. Richard Norgaard. Nine members of the Board were present for the meeting: Brian Atwater, Elizabeth Canuel, Tracy Collier, Edward Houde, Judy Meyer, Jeffrey Mount, Richard Norgaard, Vince Resh, and John Wiens. Michael Healey was absent from the meeting.

No new conflicts or need for new disclosures were disclosed for any of the present Board members. Tracy Collier was appointed to the Puget Sound Partnership Science Panel, but the appointment does not pose any conflict.

Delta Science Program Staff in attendance:

Cliff Dahm, Lauren Hastings, Marina Brand, Gina Ford, Joanne Vinton

2. Delta ISB Chair's Report – Dick Norgaard

- Lead scientist recruitment is on track, but moving slowly.
- Delta Plan EIR will not be reviewed by the Board.
- Bay Delta Conservation Plan (BDCP) EIR will be reviewed by the Board.

3. Lead Scientist Report – Cliff Dahm

- The Association of California Water Agencies conference is this week. The Delta Stewardship Council (DSC) presentation made by Randy Fiorini and Felicia Marcus is posted.
- The comment period for the draft Delta Plan EIR was extended to February 2, 2012.
- The DSC November newsletter is posted and includes an interview with Delta ISB member Meyer.
- The Delta Science Program (DSP) Science News is posted.
- The DSP has planned two review panels on implementation of the Operations Criteria and Plan Reasonable and Prudent Alternatives, and the Delta Protection Commission Economic Sustainability Plan.
- The latest issue of the San Francisco Estuary and Watershed Science journal is posted. Funding needs to be discussed at a future meeting as the DSC would like others to contribute. The Board suggested considering page charges. The current contract expires on June 30, 2012.

- Four DSP issues were reported at the DSC November meeting: a conference hosted by the Experimental Program to Stimulate Competitive Research (EPSCR), an update on salmon returns, a summary of the new Glibert paper, and the status of two climate patterns, El Niño/Southern Oscillation and La Nina.
- Funding for the next class of Science Fellows was approved. The DSP will consider focusing the solicitation on the policy chapters of the Delta Plan.
- The webcast of the Delta Stressors Panel from the last DSC meeting is posted.
- The Department of Fish and Game is proposing loosening regulations (size and bag limits) on fishing for striped bass including designating Clifton Court Forebay as a hotspot. The California Department of Pesticide Regulation is proposing to tighten limits on the application of pyrethroid pesticides. The DSP is writing comment letters for both proposals. The letters emphasize use of conceptual models and adaptive management, and ask that human behavior be considered.

4. Discussion with Agency Leaders

The Board invited agency leaders to the meeting to discuss how Delta science is used in decision and policy making. This information will be used by the Delta ISB as part of its high level review of Delta science programs, as required by the Delta Reform Act of 2009. To view the questions that were posed to invited participants, click here.

- Maria Rea, National Oceanic and Atmospheric Administration - Southwest Region—The DSP is effective and should be continued. However, decision-makers do not have all of the data needed to make day-to-day decisions, such as acoustic tracking of salmonids through the Delta. Staffing needs to be improved in order to participate in the early stages of model design. The Columbia River project has many more staff and a good system for tracking salmonids. Science programs in the Delta need the same type of system.

  Science programs could build off the Interagency Ecological Program (IEP). Better synthesis of existing information for decision-makers is needed, as is more funding for science tools, such as models, and more collaboration, openness, and transparency. Separate and distinct roles for the science community are not needed.
- Dave Zezulak, Department of Fish and Game—To view written comments, click here.
- Erwin Van Nieuwenhuyse, US Bureau of Reclamation - Northern California—The Bureau has a very strong commitment to science (research, monitoring, and adaptive management) and funds a substantial portion of the science conducted in the Delta. They feel fortunate to have world class universities and agencies nearby. IEP has long data sets, but fewer monitoring stations are available now at the lower trophic levels, although more stations exist for fish.

Science programs (in and upstream of the Delta) should be integrated into one cohesive, unified program. Journal articles are too technical and hard to read for decision-makers. Agency staff tend to write in the interest of their agencies—more independence is needed. Publishing is slow. Bold experiments are needed. Instead of starting new programs, consider restructuring existing programs by separating monitoring out as the foundation and giving it reliable funding. Research funding should be competitive.

- Mike Chotkowski, US Fish and Wildlife Service - Region 8—Delta science has collected a lot of data, but has not integrated it or developed questions that can lead to knowledge. There is a tendency to underestimate the complexity of dealing with information collected on different time and spatial scales. Engineering (as opposed to natural science) has done a better job because it has more credibility and less uncertainty.

  Emerging issues are climate change and ecosystem effects of flow regime changes. More levels of inquiry are needed. Communication is not a big problem, but more publishing is needed. Roles will not change because agencies have distinct roles. There is a need to consider funding an independent body doing research at a higher level that is unbiased, credible and represents one source of information.

- Dale Hoffman-Florke, Department of Water Resources—A balance of research and economics is needed. Funding sources can be an issue. More good science with reviews is needed, such as the fall X2 review, which was very helpful. Court decisions make science difficult. Could ISB review the design of experiments to keep them out of court?

  Emerging issues are climate change, sea level rise, and Delta levee protection. Well developed science is needed.

  Regarding communication, expectations need to be managed—not all answers are available. Information needs to be understandable to the public. Distinct roles are not needed. Multi-disciplinary teams are needed with charters, roles, and responsibilities. The organization of the Pelagic Organism Decline program is good. More time to do good science is needed, but people are impatient. Laying out timelines and expectations would help.

  Limited funding is a problem. Most funding comes from state water contractors. Due to hiring freezes and vacancy sweeps, consultants do much of the work.

- Jerry Meral, California Resources Agency, Deputy Secretary—Only three people are in the Bay-Delta office. There is a lack of informal interaction with researchers and university scientists, so their personal insights are missing. Also, scientists do not feel that it is their role to provide informal insights. Meral would like the ISB to facilitate informal interactions.

  The first Public Policy Institute of California (PPIC) report (Envisioning Futures for the Sacramento-San Joaquin Delta) was a model for how science should proceed. Language that decision-makers can understand is needed. Litigation has led to combat science, which has hurt species.

Government needs to try things that are on the edge and find the best ideas. Adaptive management examples are focused on terrestrial species. Adaptive management in water is on the cutting edge—it requires more thinking.

Emerging issues are climate change, outflow, and invasive species. Control of invasive species needs more research because it has not been science-based, and has focused only on mechanical removal. The Board is in a good position to decide which scientific issues should be addressed over the next few years. Peer-reviewed science is important—it might help to discourage lawsuits. Science needs to be more understandable and accessible to the public.

- Thomas Howard, California State Water Resources Control Board—The agency is working on three projects simultaneously: San Joaquin River flow objectives, Delta outflow objectives and the Sacramento River, and flow objectives for Delta tributaries. Disagreement on scientific understanding is a problem as is balancing flow objectives with their economic impact. Revising flow objectives occurs on a 10-year cycle, and is a very large effort which makes it very difficult to apply adaptive management. For adaptive management, a process is needed to determine where to operate in a range of possibilities.

  The agency keeps up with research by reading the literature, but has no direct communication with researchers and does not travel out of state since it is currently prohibited due to budget constraints.

- Open discussion—What is a neutral party? Tension between stakeholders and agencies stands in the way of sorting out the truth, so peer review is important. Judgments are needed from people who have no stake. Does the process used by the National Research Council work? A different culture is needed, as are safe places for scientists to talk without fear that the notes will be published. It is risky to propose wild ideas. The panel voiced some disagreement with the idea of a safe place, but agreed that neutral scientists are needed to testify to decision-makers. A modeling group exists, but biologists have not been able to organize a similar group. Having everyone meet together can lead to a common understanding. Innovation can come from taking scientists out of their silos, and the realities of funding can create an opportunity for science to be done differently. The science community does not collaborate a lot. More resources are needed. Science is not the sole basis for decision-making.

  Adaptive management—Can adaptive management really work? How does the circle work? The DSP grants might need tuning. For example, the DSP could group proposals that are in the same geographic area instead of taking only the best proposals regardless of location. The DSP could fit the proposals into the adaptive management structure instead of waiting until the projects are finished. Delineation of clear goals and objectives are needed as well as triggers if the effort is not proceeding as planned.

Experiments—Bold experiments are hard to do, but smaller ones are possible, for example, determining flow paths through the Delta. An example of a bold experiment is when the pumps were turned off in the 1980s. Other examples of bold experiments are closure of the cross-channel (Delta) gates, restoration of the San Joaquin River, and the biological opinions with Reasonable and Prudent Alternatives. An idea for a bold experiment—let the first flush of the season go through the system naturally and see what happens. The Endangered Species Act makes it difficult to try bold experiments. Broader ecosystem approaches are needed, such as predator control with removal. Take permits are needed but require a lot of time to obtain. Adaptive management and experiments are closely tied. When doing experiments, it is difficult to keep everything else constant. It is also a problem that experiments are done only once, but single experiments can be effective if conclusions are drawn statistically.

5. Discussion with Stakeholder Representatives

The Board invited stakeholders to the meeting to discuss how they use Delta science to make decisions.

- Steve Arakawa, Metropolitan Water District— Water agencies are responsible to their ratepayers. Their main interest is making sure that when regulatory protections are established, they are effectively established based on science, and effectively implemented. The water agencies can help contribute to science. It is important that DSP and the Board play a key role. The Board can help point things in the right direction in terms of proper approach and hypothesis testing. DSP can further define how to get it done and help with interpretation and decision making. Much information has been collected over many years, and it should be used.
- Pete Kutras, Delta Counties Coalition—To view written comments, click here.
- Stan Dean, Sacramento County Regional Sanitation District—To view written comments, click here.
- Paul Weiland, Paramount Farming Company—To view written comments, click here.
- Terry Erlewine, State Water Contractors—Chose to defer comments until the open discussion period.
- Leah Orloff, Contra Costa Water District—There is a need to restore confidence in the agencies. The District is a heavy user of publicly available data, which helps them move their projects forward. The Board should support a new IEP time series data portal and use of data to improve modeling. After the models are validated, benchmark studies should be released for public use and should include climate change effects.

  Emerging issues are effects of temperature change, sea level rise, and shifts in precipitation. Science communication should be improved. The joint IEP/water modeling forum is very good and needs stable funding.

- Gary Bobker, The Bay Institute—Definitions for terms such as “best available science” and “functioning ecosystem” are needed. Decisions are often made before science is considered, then research is sought that supports the decisions. Risks, uncertainties, and tradeoffs need to be identified to attain goals. Outcomes need to be measurable. Decision-makers need to know how to engage in ecosystem design, test hypotheses, and understand risk. The Board needs to review how science is used in a rigorous way. Flow is one of the biggest issues, but all stressors are important and their interactions need to be investigated.
- Tina Swanson, Natural Resources Defense Council—To view written comments, click here.
- Cynthia Koehler, Environmental Defense Fund—Decision-making is the problem and how science is used, not the science itself. No standards exist for what the science should be to make decisions. Decision-makers hesitate to act without certainty, but legally, substantial evidence is enough. Help is needed to distinguish between standards needed for scientific truth and standards needed to make policy.
- Byron Buck, State and Federal Contractors Water Agency—To view written comments, click here. Byron Buck spoke on behalf of Steve Arakawa of the Metropolitan Water District of Southern California, Terry Erlewine of the State Water Contractors, BJ Miller of the San Luis and Delta-Mendota Water Authority, and Jason Peltier of Westlands Water District.
- BJ Miller, San Luis Delta Mendota Water Authority—Mr. Miller supports Mr. Buck’s comments. Peer review lacks rigor and is not enough for making multimillion dollar decisions. Peer review is anonymous and unpaid.
- Leo Winternitz, The Nature Conservancy—To view written comments, click here.
- Mike Machado, Delta Protection Commission—Science is too often done in a silo. Politics determine the science that is pursued and often, science is politicized. Transparency, information, and cost-benefit analysis are needed. Policy-makers are in the way of making good decisions. The social and engineering aspects of projects need to be considered.
- Tom Zuckerman, Central Delta Water Agency—Mr. Zuckerman is concerned that stakeholders will direct science. What is the best use of the Board’s resources? The Board should develop testable hypotheses, organize around them, and peer review them. Science should be used to make informed decisions rather than making decisions and then leaving it to adaptive management to correct them.
- Jason Peltier, Westlands Water District —Chose to defer comments until the open discussion period.
- Campbell Ingram, Delta Conservancy—Ingram stated that the Delta Conservancy is concerned with ecosystem and economic development in the Delta. Delta science needs clear biological goals, objectives, and metrics as well as an integrated program of science. It is important to understand that certainty is not possible in this system when making decisions.

Better outreach is needed, as is the ability to convey a lot of information quickly to the general public.

- Richard Roos-Collins, American Rivers—The 1850 public trust doctrine guaranteed passage of fish. So what went wrong? How can it be fixed? The Board is just one of many science agencies doing work but they could: 1) develop trend analyses for physical drivers and the condition of biological resources, 2) coordinate an inventory of existing data and assign responsibility to the agencies for the inventory of at least the seven critical drivers, 3) establish guidelines for the science that is used in regulatory permits, and 4) solve the mystery for how adaptive management works.
- Open discussion—The Board does not have the authority to do many of the things the stakeholders are asking for. Some of the recommendations fall under the purview of the DSP. The state has no jurisdiction over federal agencies.

  Disagreements and litigation—Can the Board arbitrate differences of opinion to avoid litigation? How would this be initiated and screened? The Board probably could not play that role. Can people give up their strong stands? What are the data that support each position? Often, it is the underlying assumption, not the data that causes disagreements. See Appendix A in PPIC's Envisioning Futures (Paradigm Shifts in Our Understanding of the San Francisco Estuary as an Ecosystem). Some panelists feel that scientists need a safe place for the free exchange of ideas. Other panelists feel that a dangerous place is needed to present and discuss scientific documents. The intent would be to narrow areas of disagreement. The real issue may be a lack of clarity regarding what each is trying to accomplish. Absent clarity, there cannot be a productive discussion between scientists and policy-makers. Environmentalists, water agencies, and other stakeholders are not talking to each other, so projects go to court. Do scientists need to network more or do they need a safe place where they do not need to worry about lawsuits? Ideas can be generated at meetings. The meetings would need a facilitator. In the past, though, this type of collaboration has not changed minds. Even after open discussion, organizations try to influence policy-makers' decisions.

  Decision-making—How much information is enough for decision-making? Is a study valid even if the results are not certain? The Board and the DSP could lead, through reasoning, in identifying how things are done, which would advance science, how it is done, and how it is managed. Specific answers to specific questions are needed to act. The Board can help to make sure that answers conform to goals and objectives. A decision-making entity, sponsor, or referee is needed in the Delta. Differences in the science that is undertaken often feed policy-makers biases.

  Science—Many institutional barriers exist that prevent integration of science programs. State and federal scientists are supposed to be impartial. Even if silos exist, the science is not necessarily suspicious. Water agencies have a role in contributing to science. Is flow the dominant driver? Can the format of workshops be improved to allow for more questioning?

Workshops and conferences are not the best venues for exchanging ideas. Is research reaching decision-makers so that they can actually use it? Research needs a broad source of funds so that results do not become suspect.

6. Public Comment (For matters that were not on the agenda, but within subject matter jurisdiction of the Delta ISB.)

Richard Denton, Contra Costa County – Indicated that he will submit written comments rather than speak.

Meeting adjourned at 4:15 p.m.

Day 2: December 2, 2011 - (9:00 a.m. – 4:30 p.m. PDT)

1. Welcome

The meeting was called to order at 9:00 a.m., September 2, 2011, by the Chair of the Delta Independent Science Board (ISB or Board), Dr. Richard Norgaard. Eight members of the Board were present for the meeting: Brian Atwater, Elizabeth Canuel, Tracy Collier, Edward Houde, Jeffrey Mount, Richard Norgaard, Vince Resh and John Wiens. Michael Healey and Judy Meyer were absent from the meeting.

No new conflicts or need for new disclosures were disclosed for any of the present Board members.

Delta Science Program Staff in attendance:

Cliff Dahm, Lauren Hastings, Marina Brand, Gina Ford, Joanne Vinton

- Norgaard asked if the Board had any thoughts about the previous day. Board members indicated that they did not receive as much guidance from agency leads or stakeholders as they had hoped. For example, no one answered the question about which programs should be reviewed first. The most common theme was flow, although uncertainty was frequently mentioned. The Board can be an advocate for having the work on flows done, and could marshal the best available science, although it may be pragmatic rather than pure. The Board should also be aware that science is just one element of the decisions that will be made and that economics will be another.

2. Discussion with Elected Officials

The Board invited legislative staff to this meeting to discuss how science is used in policy and decision-making.

- Dennis O'Connor, Staff to Fran Pavley, Chair of the California Senate Natural Resources and Water Committee—To view written comments, click here.
- Tina Cannon Leahy, Staff to Jared Huffman, Chair of the California Assembly Committee on Water, Parks and Wildlife—She has seen situations when science was used to make a decision, and when science was altered when a decision was made. The number one question is how much flow is needed to protect the estuary and how much can be exported. The sideboards for making this decision will be provided by science. Power shifted to the fisheries agencies when the biological opinions were published; the opinions gave credibility to decision-making. In a similar way, the Board needs to help bring credibility to future decisions.

  Another important issue is making science accessible to the public. The DSP's Science News is great. The DSP could also help people know what standards mean, such as "best available science." Funding sources for science should be as objective as possible.

  The idea that the Delta is affected by many stressors has led to procrastination—who is responsible? There is confusion about BDCP—why is a 15,000 cubic-foot-per-second tunnel needed? Who will pay for it? Peer review is important. The science must be as objective as possible. A formal appeals process is needed. Distinct roles are not needed. Science needs specific checkpoints where ideas would be defended to the Board. The BDCP is a 50-year permit. It must not be a free-for-all negotiation. The Board could ensure that decision-making is based on credible science and illuminate the assumptions.
- Mindy Simmons, for Lois Wolk, California Senate—The state seems to be facilitating exporters. The credibility of the Board is important. The rhetoric around science leads to confusion. The best available science needs to be communicated clearly. Flow is critical to the ecosystem and to Delta residents.

  Regarding adaptive management, does it need to wait for the best science, so nothing is done until it is ready? The BDCP effort has brought up the issue of the value of restoration. What is its value with and without flow? Restoration must not be just mitigation or perceived as such. For example, in the Yolo Bypass, will flooding rice fields really help fish?
- Josh Franco, for John Garamendi, US Representative—A comprehensive water strategy is needed because of future changes (e.g., climate). Important values and issues include conservation, recycling, underground storage, efficient use of resources, and possibly above-ground storage. The geographic scope needs to be bigger than the legal Delta.

  The Board is the brain stem of Delta knowledge and that knowledge needs to be communicated to the public and policy-makers. Agencies need money, staff, and time. Do they have it? What level of long-term investment is needed? Congress needs a clear understanding of the staff and time needed to do the job, including education and teaching young scientists. Grants, fellowships, and journals are good.

The availability of water needs to be viewed on a geological time scale as daily and weekly reports do not provide the larger picture and long-term trends. The public needs to understand what an ecosystem is and how it changes. The newsletter (Science News) is good, but Congress needs regular briefings in DC, possibly quarterly. The Board could call staffers and invite them to talk, which could influence hearings and bills. Collaboration between scientists needs to continue through conferences and other ways. There should be a recognition that everyone desires to know/learn more.

- Open discussion—The Board's purpose is to provide oversight. Who determines what issues the Board should address? The legislation broadly defines their responsibilities. Legally, the Board is only required to review the BDCP EIR. The Board should identify niches that are not being filled and fill them. For example, the Board could hear appeals from other agencies when the agencies are being pressured by powerfully backed science. The Board, along with the DSP, could produce a body of knowledge to help in decision-making. The Board could also guide the DSP on the quality of its work and the scientific questions it should be studying. The Board needs to make sure that the DSP does a good job on the Delta Plan.

  The Board should take a long-term view and ask long-term questions. For example, if BDCP goes forward, what would the impact be of the 50-year decision? The Board needs to remind the short-term political thinkers of the long-term view of environmental impacts. The Board can play the role of asking: what is the broader good or the broader purpose?

  The DSP has been successful at being neutral, independent, and objective and should have a stable source of funding. It is important that the Board and the DSP maintain their respective independence from each other. What are the boundaries between the Board and the DSP? The Board reviews science and how it is done, while the DSP acts.

  Communication—The Board needs to write a white paper for legislators that explains what their job is. Legislators are currently discussing stable sources of funding for all water-related programs.

  BDCP—A more immediate concern is the BDCP. It should undergo a mid-project review with the Board reviewing the quality of the science and how the science is being conducted. The Board expressed concern about using all of their time reviewing the BDCP. The BDCP is using the biological opinions as the gold standard, but the biological opinions are jeopardy opinions and not best-case scenarios. The BDCP should be and legally needs to be a conservation plan. Can the BDCP guarantee flows 50 years into the future? Maybe 50 years is too long for the permit to be effective.

  Use of consulting companies—Use of consulting companies is a concern. What about continuity and accountability? Do agencies need more science staff? There are three important questions: Has the science been peer reviewed? Did the Board review it? What did the Board conclude?

Flow objectives—How best can the Board contribute to the debate on flow? Can the Board be proactive and not just responsive? Should it avoid economic questions? Can habitat restoration take the place of flow? How much water do fish need? What is a restored Delta, especially given climate change and invasive species? In a restored Delta, will changes in salinity be greater? What have been the historical flows from rivers? What are the effects on changes to rivers? What is the range of options and what are the effects on flows? Instead of asking "what's a restored ecosystem?" ask "what do people want?" It is a social question. Is preventing a catastrophic failure of the Delta a high priority? Will the estuary be maintained as a freshwater lake?

Communication—The Board could communicate more through editorial boards, Twitter, Facebook, and conversations with legislators. It is important to remind legislators of the long-term view. Is the Board responsible for communicating with the public or only with other scientists and the Legislature? The ISB website needs reorganization because information is hard to find. A better website would help with funding. To get public support, the Board needs to communicate what it is doing. The public does not understand the basics, so decisions are based on misunderstanding.

- Public comment from Val Connor, State and Federal Contractors Water Agency—Regarding the seven questions that the Board is asking: problems and litigation are increasing, but there is progress in water quality and contaminant decreases. The Board could consider what the State Water Resources Control Board is doing and how it has been able to affect change.

  IEP data are the cornerstone of Delta knowledge (but IEP needs to be reviewed as a program). The DSP is vital to the success of the Delta Plan. Their successes include the organization of external review panels. The conceptual and lifecycle models workshops were good and development of them should continue. IEP has been trying to reinvigorate the stakeholder process. That is essential. Stakeholders have felt frustrated and need to feel heard.

  The water agencies do not feel heard and litigation will continue. Discussion will not help if polarization continues. The Regional Monitoring Program for the Delta is a success because everyone has input on the projects.

3. Delta ISB Discussion on Key Issues Provided by Invited Participants

The two main points made repeatedly by participants are that flow is the most common concern and that products from DSP should pass through the Board for discussion, and approval or disapproval.

How can a Board member observe independent reviews, such as the review of the Delta Risk Management Strategy, without influencing the process, especially if the Board member participates? Should the Board review other reviewers? Should the Board review all reports produced by the

independent review panels that the DSP organizes? Should the Board make recommendations to legislators or to the DSC, for example, based on what it learns from a review panel?

How should the Board interact with the DSP? How can the Board remain independent of the DSP? Before a review occurs, the Board could make sure that the charge to the panels prepared by the DSP is asking the right questions and that the panelists are independent of the DSP. It could provide more substantive comments on DSP work. The Board can set priorities for the DSP. For example, maybe the DSP could think about long-term issues and the dangers of doing business as usual. The Board could interact more with the DSP without being involved in decisions.

The Board needs to think about what to consider when reviewing programs. The Board could observe the process used and comment on it, ask clarifying questions, and possibly provide information.

The five objectives of the DSP are to (1) peer review proposals; (2) organize workshops and synthesize research; (3) communicate through conferences, factsheets, and lead scientist reports; (4) support research; and (5) coordinate to support adaptive management. At this time, DSP is weakest at synthesizing research and strongest at setting up review panels. The DSP will let the Board know when workshops are scheduled. Review panels should always be a mix of insiders and outsiders—the Board can recommend panelists. Should the review panels be done in a different way? How well do other entities respond to the DSP reviews?

The proposed next steps for the Board are to:

- Draft two memos. The first memo will be a two-pager that explains the need for the DSP; the second, longer memo will clarify the role of the Board, the DSP, and their interaction, and will be distributed to all legislative staff. The longer memo will include the importance of the DSP as a forum for working out conflicts, a summary of what the Board learned during the October and December meetings, a description of funding issues, and an overview of the state of the science.
- Review the BDCP science to date, starting with Chapter 7 (Implementation Structure).
- Review the State Water Resources Control Board flow objectives, specifically for the San Joaquin River.
- Review the BDCP EIR when it is published (scheduled for June 29, 2012).
- Review the IEP.
- Consider publishing a longer article about the Board in Science News. Seek advice on the idea of using the first memo as an op-ed.

The Board will wait to review the DSP until the new lead scientist and all new staff are hired.

4. Public Comment (For matters that were not on the agenda, but within subject matter jurisdiction of the Delta ISB.)

No public comment was provided.

5. Preparation for next Delta ISB Meeting (Jan 12-13)

The purpose of the next meeting will be to review the two draft memos and review Chapter 7 of the BDCP.

Meeting adjourned at 2:45 p.m.